

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 15 of 2015, which covers the period from 05 - 11 April 2015.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 180.6 to 233.8 kcfs. Daily average powerhouse forebay elevation ranged from 73.9 to 75.4 msl. Daily average project tailwater ranged from 15.8 to 19.0 msl. Secchi disk measurements ranged from 5.5' to 7.0'. Daily average water temperature ranged from 49 to 50°F this week.

b. Spill Bays 01 and 18 are open during daytime hours to provide attraction flow for Cascades Island and B-branch, respectively. Daily average spill ranged from 1.4 to 99.9 kcfs. Spring Spill started on 10 April.

c. Unit Operation. Powerhouse two remains the priority powerhouse. Main unit draw downs are measured every Monday and more frequently as needed.

(1) Table 1. Unit Outages. No units were out of service this historic week.

d. Fish Units. Second Powerhouse fish units provide attraction flow for the Washington Shore (WS) fish ladder. The units may be placed on standby, as necessary, during nighttime hours to float debris. Gatewell drawdowns are measured daily.

(1) Table 2. Fish unit drawdowns, in feet.

| Date | F1 | F2 |
|------|-----|-----|
| 4/5 | N/A | N/A |
| 4/6 | 0.8 | 0.5 |
| 4/7 | 0.5 | 0.3 |
| 4/8 | 0.3 | 0.2 |
| 4/9 | 0.6 | 0.5 |
| 4/10 | 0.7 | 0.5 |
| 4/11 | 0.4 | 0.4 |

2. ACTIVITIES:

a. Auxiliary Water System Closures. No closures this week.

- b. STS/VBS inspections. No inspections occurred this week.
- c. Dewatering and Fish Salvage. No dewaterings or salvages occurred this week.

3. RESEARCH:

- a. CRITFC – AFF. Adult salmonid sampling is scheduled to begin the week of 13 April.
- b. CRITFC – Sea Lion hazing. Hazing by boat began on 06 March and will continue through May.
- c. Fisheries Field Unit – Sea Lion Observations. Observations commenced on 13 January and will continue through 29 May.
- d. NOAA – FGE testing. Biological testing of the flow control plate installed in the Unit 15-A gatewell began on 1 April using sub-yearling Chinook. Testing in 15-C will occur in May. Review the FFDRWG update form [here](#).
- e. Normandeau – Fish Counting. Video monitoring continued until 01 April, when visual counting commenced.
- f. PSMFC – Smolt Monitoring Program. Juvenile fish condition and index monitoring continues. No research fish were collected this week. SbyC is active for NOAA research as of 30 March. These fallbacks were recorded crossing the separator bars: 46 Steelhead and 2 Salmon. More details can be found on the [FPC web page](#).
- g. USDA – Sea lion and avian hazing. Land-based hazing began on 18 March.

4. FISHWAYS:

- a. Project biologists inspected 05 - 11 April.
- b. Fish passage plan observations.

(1) Table 3. FPP out of criteria items.

| Date | Location | FPP Items | Cause | Response |
|---|-----------------|-------------------------|------------------------------|----------|
| BRADFORD ISLAND | | | | |
| 4/6-9 | A-branch | Weir water level > 1.1' | Suspected FV3-7 conduit leak | None |
| CASCADES ISLAND | | | | |
| 4/11 | UMT staff gauge | Level <0.9' | Unknown | NA |
| WASHINGTON SHORE – Nothing to report | | | | |

(2) WG-1, one of the south PH1CC entrances, experienced a gate failure on 17 November. The gate fell and the picking beam fell into the water. WG-2 has been closed to improve entrance differentials. Repairs will require the ITS to be closed and

are being coordinated for August, 2015.

(3) A-branch diffuser FG3-3 is mechanically bound. Repairs are not possible until A-branch is dewatered below tailwater during the 2015/16 winter maintenance period.

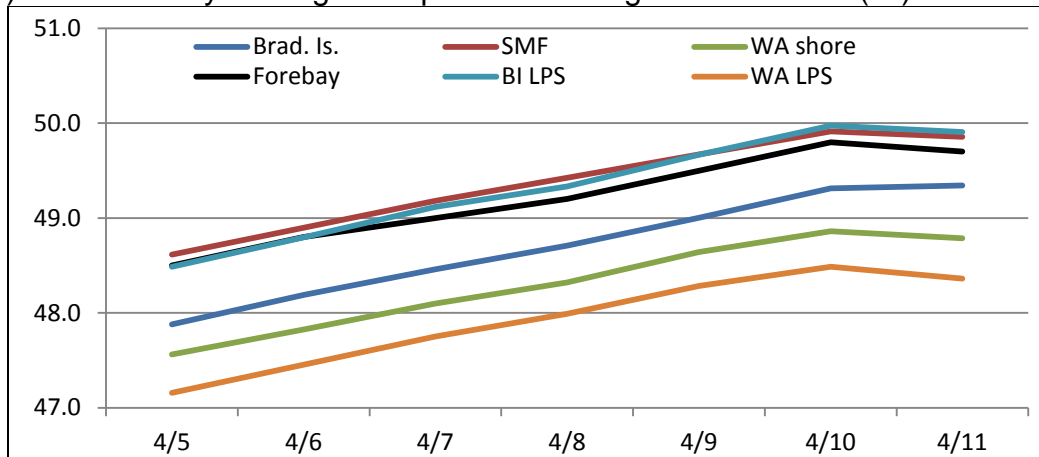
(4) PH2CC diffuser A2 was unable to be repaired during winter maintenance and remains closed. The gate for diffuser B5 was removed for repairs and therefore cannot be closed.

c. Fishway Temperatures. Temperatures are taken from 01 March through 30 November. Forebay temperatures can be found [online](#).

(1) Table 4. Daily Average Temperature in Degree Fahrenheit (°F).

| Date | Fishways | | | Lamprey | | | Forebay |
|------|-----------|----------|------|---------|--------|--------|---------|
| | Brad. Is. | WA shore | SMF | BI LPS | WA LPS | CI LPS | |
| 4/5 | 47.9 | 47.6 | 48.6 | 48.5 | 47.2 | 47.9 | 48.5 |
| 4/6 | 48.2 | 47.8 | 48.9 | 48.8 | 47.5 | 47.8 | 48.8 |
| 4/7 | 48.5 | 48.1 | 49.2 | 49.1 | 47.8 | 48.5 | 49.0 |
| 4/8 | 48.7 | 48.3 | 49.4 | 49.3 | 48.0 | 48.7 | 49.2 |
| 4/9 | 49.0 | 48.6 | 49.7 | 49.7 | 48.3 | 49.0 | 49.5 |
| 4/10 | 49.3 | 48.9 | 49.9 | 50.0 | 48.5 | 49.2 | 49.8 |
| 4/11 | 49.3 | 48.8 | 49.9 | 49.9 | 48.4 | 49.1 | 49.7 |

(2) Chart 1. Daily Average Temperature in Degree Fahrenheit (°F).



d. Zebra Mussel Monitoring. No signs of colonization were observed this reporting week.

e. Adult Fishways.

(1) Calibration occurred on 10 April.

(2) 11 of 12 floating orifice gates (FOGs) are installed; one gate is out for

maintenance. FOG SLEDs are installed.

- (3) All SLEDs remain installed.

f. Juvenile Fishways.

- (1) The south end gate of the Ice and Trash Sluiceway (ITS) was removed for repairs. Plating has been placed over the bottom of the guide slot to minimize fish impacts. Reinstallation dates are currently being coordinated for August, 2015.

- (2) The hydro-cannon remains in service.

- (3) The B2CC remains open.

- (4) The DSM remains in service.

g. Lamprey Fishways.

- (1) The Bradford Island LPS and the WA AWS LPS were returned to service at ~1400 on 31 March.

- (2) The Cascades Island LPS was returned to service at ~1500 on 06 April.

- (3) The PH2 NDE LFS/LPS remain out of service.

5. CONSTRUCTION:

- a. CRITFC successfully installed two PIT antennas in the AFF fishway the week of 05 April, one at the entrance and one at the downstream end of the return pool channel.

6. HAZMAT, SPILLS AND CLEANUP: Nothing to report.

7. TELETYPES CURRENTLY IN EFFECT:

- a. A teletype sent on 30 March updates the spill caps and lack of load conditions to be used from 0000 on 01 April until further notice.

- b. A teletype sent on 31 March states that effective 01 April through ~04 June, operate PH2 units 14 and 15 as defined in the schedule for the PH2 gatewell evaluation. Test period dates may be adjusted by the researchers as necessary with coordination with the BON control room. Normal unit operations will resume during non-test periods.

- c. A teletype sent on 08 April defines the spring and summer spill operations to be used from 10 April through 31 August.

d. A teletype sent on 10 April cancels all previous teletypes directing operations for Chum Salmon spawning and incubation.

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